Robert C. Colwell, Reg. No. 27,431   *(650) 326-2400*

Applicant: Yasuaki NAKAMURA, *et al.*
Title: Disk Control System and Control Method of Disk Control System
Atty Docket No. 16869K-090400US
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FIG.1

FIG.2

FIG.3

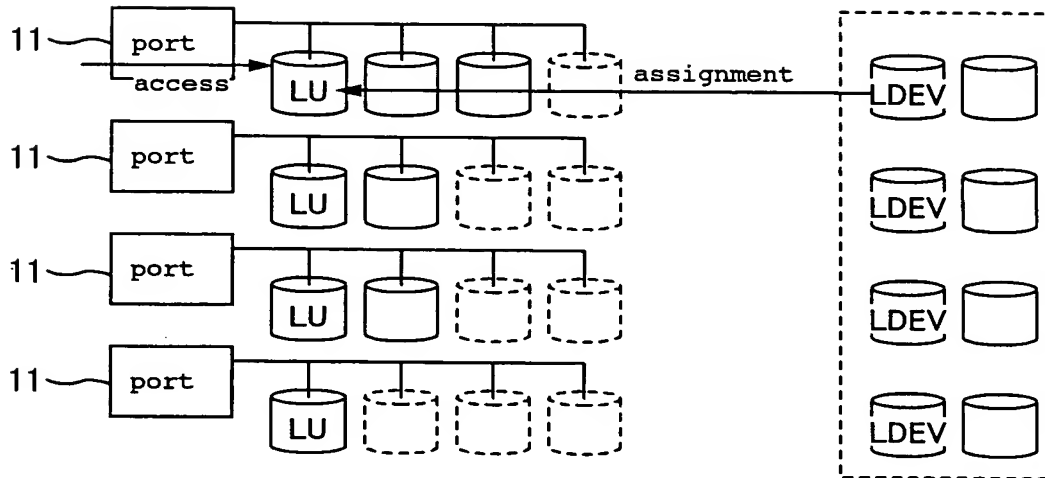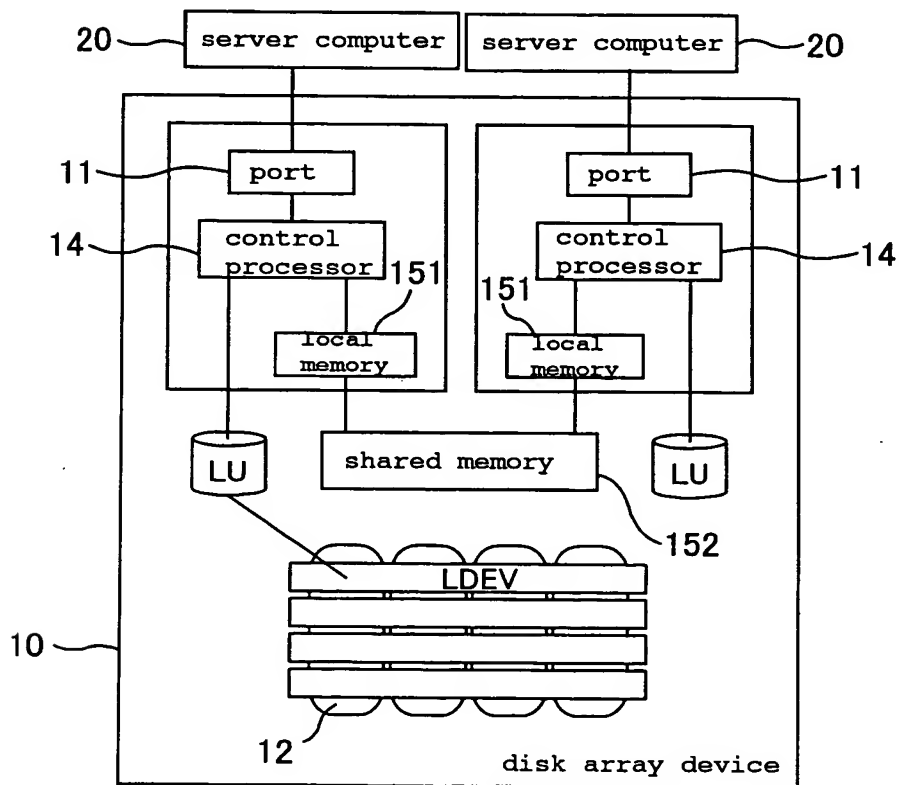*Robert C. Colwell, Reg. No. 27,431*   *(650) 326-2400*

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LU mapping table

LUN	LDEV#
0	0001
1	0002
⋮	⋮

FIG.4

Global LU mapping table

port	LUN	LDEV#
1A	0	0001
	1	0002
	⋮	⋮
	254	NULL (no LDEV assigned)
	255	NULL
1B	0	1001
	1	1002
	⋮	⋮
	255	NULL
⋮	⋮	⋮

FIG.5

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Global LDEV table

Flag	LDEV#
1(Path)	0001
1	0002
0(No path)	0003
⋮	⋮
1	1001
1	1002
⋮	⋮
0	2001
1	⋮

FIG.6

LUN

host view

FS···Device File(/dev/rdsk/c0t0d2)···HBA···Port···virtual LUN ------ LDEV

server-side
HBA

port ID

response to host access
(inquiry,Read Capacity)
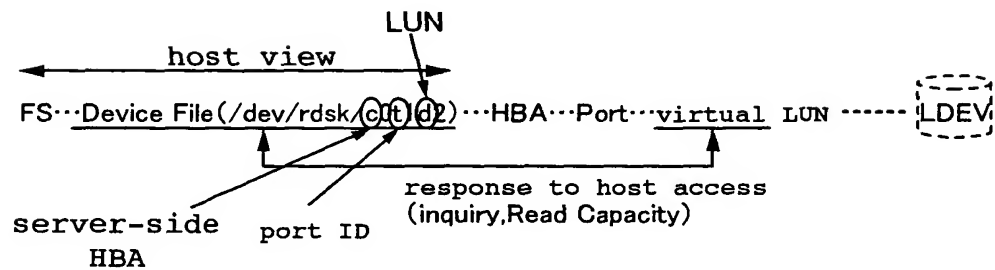
FIG.7

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Applicant: Yasuaki NAKAMURA, et al.
Title: Disk Control System and Control Method of Disk Control System .
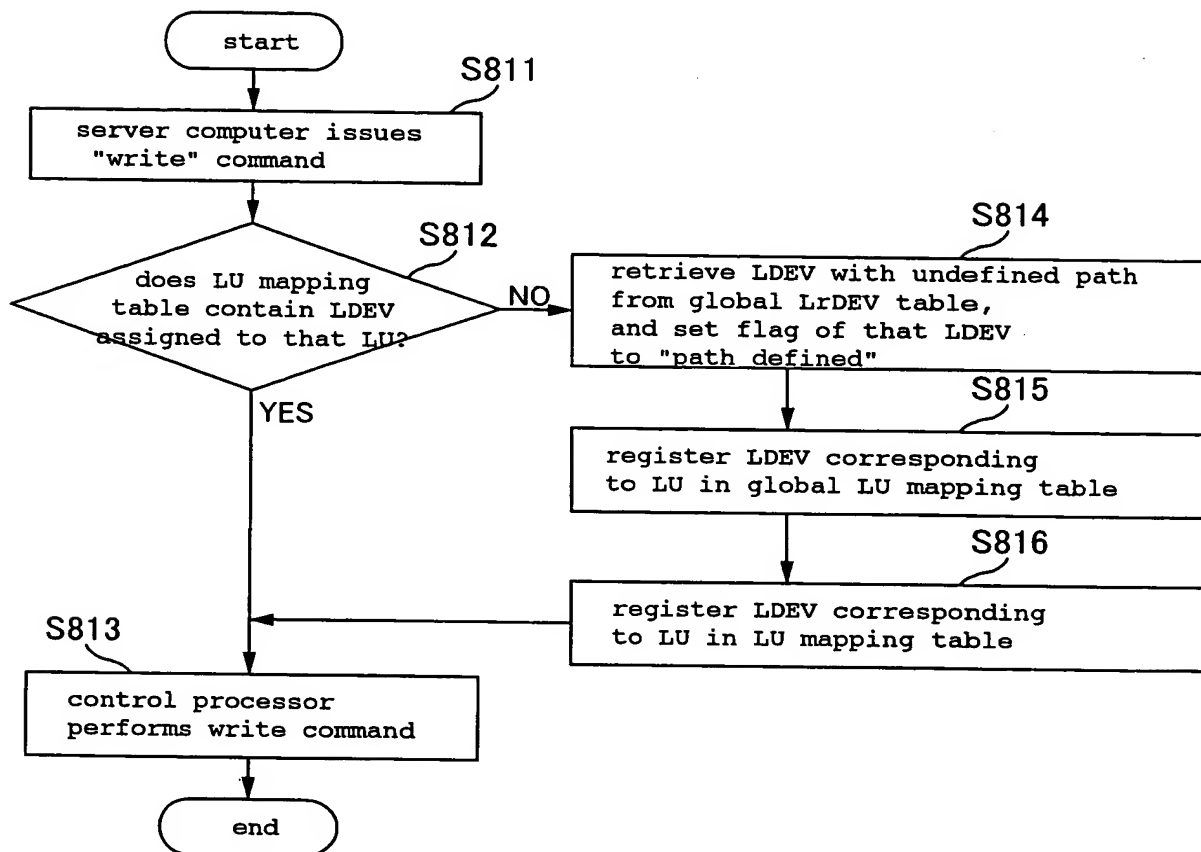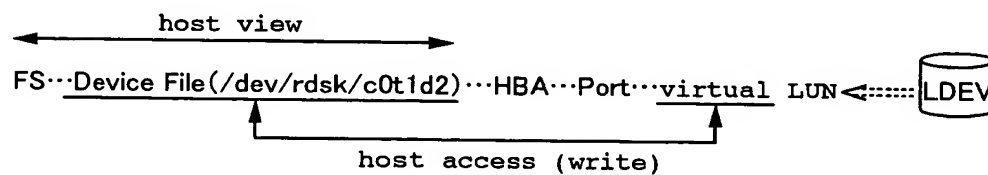Atty Dock t No. 16869K-090400US
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start

S811

server computer issues
"write" command

S812

does LU mapping
table contain LDEV
assigned to that LU?

NO

S814

retrieve LDEV with undefined path
from global LrDEV table,
and set flag of that LDEV
to "path defined"

S815

register LDEV corresponding
to LU in global LU mapping table

S816

register LDEV corresponding
to LU in LU mapping table

YES

S813

control processor
performs write command

end

FIG.8

host view

FS···Device File(/dev/rdsk/c0t1d2)···HBA···Port···virtual LUN ⟨═══ LDEV

host access (write)

FIG.9

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Titl : Disk Control System and Control Method of Disk Control System
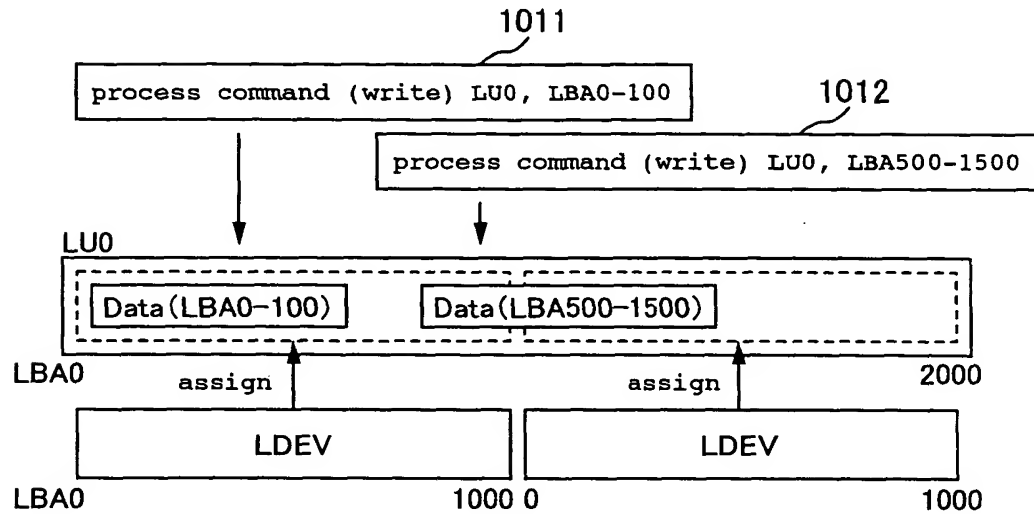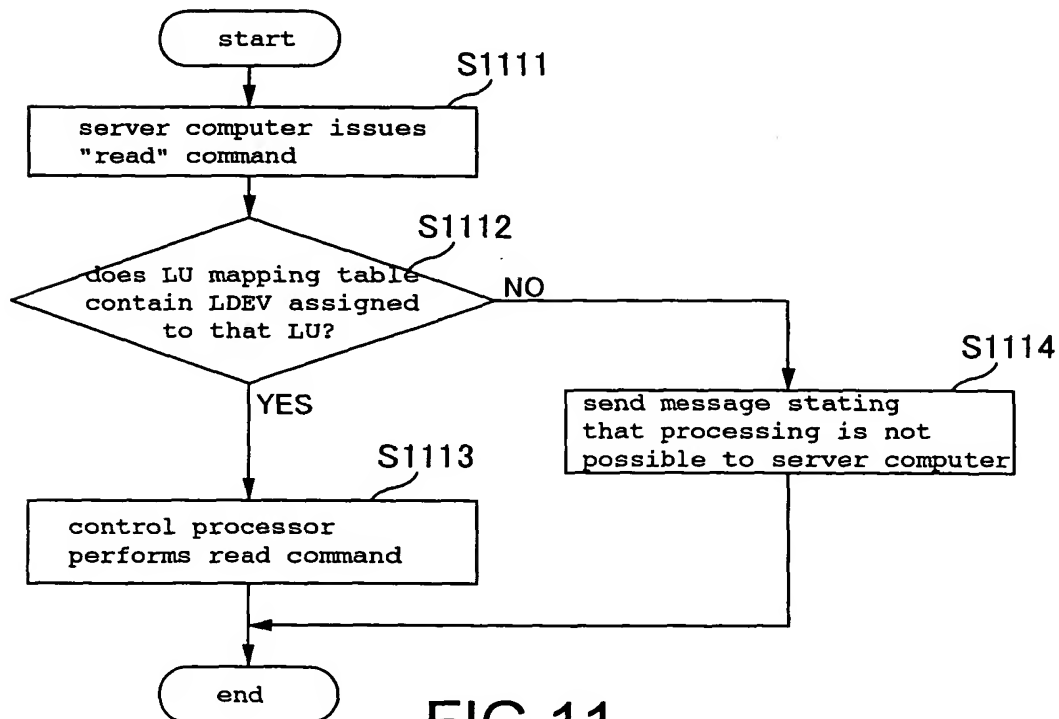**Atty Docket No.** 16869K-090400US
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1011

process command (write) LU0, LBA0-100

1012

process command (write) LU0, LBA500-1500

LU0

Data(LBA0-100)   Data(LBA500-1500)

LBA0   assign   assign   2000

LDEV   LDEV

LBA0   1000 0   1000

FIG.10

start

S1111

server computer issues
"read" command

S1112

does LU mapping table
contain LDEV assigned
to that LU?   NO

YES

S1114

send message stating
that processing is not
possible to server computer

S1113

control processor
performs read command

end   FIG.11